

**Work Order ID** 100894

May-01-13 7:27:36 AM

\*100894\*

Page 1

**Item ID:** D3209-041

Accept

\*N900040100\*

Setup

Start

\*NS1\*

**Revision ID:**

Stop

\*NS2\*

**Item Name:** Bracket Assembly

**Start Date:** 4/30/13

**Start Qty:** 4.00

\*4\*

Cust Item ID:

**Required Date:** 4/30/13

**Req'd Qty:** 4.00

\*4\*

Customer:

**Reference:**

**Approvals:**

**Process Plan:** ML5

**Date:** 13-05-03

**Tooling:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Run

Start

\*NR1\*

**QC:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SPC (Y/N):** \_\_\_\_\_

**Date:** \_\_\_\_\_

Stop

\*NR2\*

<b>Sequence ID/ Work Center ID</b>	<b>Operation Description</b>	<b>Set Up/ Run Hours</b>	<b>Tool ID</b>	<b>Tool #</b>	<b>Plan Code</b>	<b>Accept Qty</b>	<b>Reject Qty</b>	<b>Reject Number</b>	<b>Insp. Stamp</b>
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
100		0.00							
<b>*100*</b>	BAND SAW								
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut blanks: 1.500" x 1.250" x 1.950" long Bar (+0.030/-0.000)								
110		0.00							
<b>*110*</b>	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	Machine D3209-1 as per Folio FA345 and Dwg D3209 Identify as D3209-1								
	Deburr and Tumble								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*120*</b>	Memo	0.00							
QC									
Quality Control									

13-05-10 10 Ø

DAS  
25  
88/3-5-12

10 Ø

DAS  
25  
88/3-5-12

10 Ø

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____  NCR No. _____										
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Ovalized	<input type="checkbox"/>	Pressure/Forced	
	Centre Not Concentric to O/S	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Temperature/Cure	
	Cracks	<input type="checkbox"/>	Broken/Damaged	<input type="checkbox"/>	Inspection Incomplete	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Weld	
	Crushed/Crimped	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Wrong Stock Pulled	
	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Maintenance	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>		
	Heat Treat	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>		
	Inspection Strip in Tube	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other	
	Ripples in Bend	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Offset	<input type="checkbox"/>		<input type="checkbox"/>		
	Torque Waves in Extrusion	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>		
	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>		
	Wave/Twist in Tube	<input type="checkbox"/>	Folio	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>		<input type="checkbox"/>		



NCR: Yes / No

## **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

QA Closed: Date:

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS										
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other								
Part No. _____		NCR No. _____														
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector							
Doc/Data																
Equip/Tooling																
Operator																
Material																
Setup																
Other																
Process																
Supplier																
Training																
Unapproved																
FAULT CATEGORY																
Landing Gear				General												
Bending	General			Bend	General			Grain	General			Ovalized	General			Pressure/Forced
Centre Not Concentric to O/S				BOM/Route				Hardware				Over/Under tolerance				Temperature/Cure
Cracks				Broken/Damaged				Inspection Incomplete				Part Incorrect				Weld
Crushed/Crimped				Burrs				Instructions Incomplete/Unclear				Part Lost/Missing				Wrong Stock Pulled
Cuffs				Contamination				Maintenance				Part Moved				
Heat Treat				Countersink				Mislabeled				Positioned Wrong				
Inspection Strip in Tube				Cut Too Short				Misread				Power Loss/Surge				
Ripples in Bend				Drill Holes				Offset								
Torque Waves in Extrusion				Drawing				Out of Calibration								
Turning Sequence				Finish				Out of Sequence								
Wave/Twist in Tube				Folio				Outside Dimensions								

**Work Order ID 100894****\*100894\***

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May-01-13 7:27:36 AM

Item ID: D3209-041

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Bracket Assembly

Stop

**\*NS2\***

Start Date: 4/30/13 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 <b>*160*</b> QC	QC3- Inspect Part Finish Memo	0.00				10	0	all 13 los 10	
Quality Control		0.00							
161 <b>*161*</b> Small Fab	Memo	0.00				10	0		88 13-05-15
Small Fab	press fit bushing as per dwg	0.00							
170 <b>*170*</b> QC	QC5- Inspect part completeness to step on W/O Memo	0.00	27 88			10	0		
Quality Control		0.00							

NCR: Yes / No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

Date:

QA Closed: Date:

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending		Bend		Grain		Ovalized		Pressure/Forced			
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure			
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld			
Crushed/Crimped		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled			
Cuffs		Contamination		Maintenance		Part Moved					
Heat Treat		Countersink		Mislabeled		Positioned Wrong					
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge					
Ripples in Bend		Drill Holes		Offset							
Torque Waves in Extrusion		Drawing		Out of Calibration							
Turning Sequence		Finish		Out of Sequence							
Wave/Twist in Tube		Folio		Outside Dimensions							

**Work Order ID** 100894

**\*100894\***

Page 4

May-01-13 7:27:36 AM

**Item ID:** D3209-041

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

**Revision ID:**

Stop

**\*NS2\***

**Item Name:** Bracket Assembly

**Start Date:** 4/30/13    **Start Qty:** 4.00

**\*4\***

**Cust Item ID:**

**Required Date:** 4/30/13    **Req'd Qty:** 4.00

**\*4\***

**Customer:**

**Reference:**

**Approvals:**

**Process Plan:**

**Date:**

**Tooling:**

**Date:**

Run

Start

**\*NR1\***

**QC:**

**Date:**

**SPC (Y/N):**

**Date:**

Stop

**\*NR2\***

**Sequence ID/  
Work Center ID**

**Operation  
Description**

**Set Up/  
Run Hours**

**Tool ID**

**Tool #**

**Plan  
Code**

**Accept  
Qty**

**Reject  
Qty**

**Reject  
Number**

**Insp.  
Stamp**

180

Identify as per dwg & Stock Location

*S G A*

0.00

**\*180\***

Packaging

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

**\*190\***

QC

Quality Control

Memo

0.00

*OK* *SP*  
*13-05-10*

*13/5/17*  
*MLJ 13-05-10*

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			<b>DISPOSITION</b>		<b>AGAINST DEPARTMENT/PROCESS</b>						
			<input type="checkbox"/> Rework	<input type="checkbox"/> Skid-tube	<input type="checkbox"/> Crosstube	<input type="checkbox"/> Water Jet	<b>Engineering</b>				
			<input type="checkbox"/> Scrap	<input type="checkbox"/> Machining	<input type="checkbox"/> Small Fab	<input type="checkbox"/> Prod. Eng. Coor.	<b>Quality</b>				
			<input type="checkbox"/> Use-as-is	<input type="checkbox"/> Thermoforming	<input type="checkbox"/> Finishing	<input type="checkbox"/> Rec/Store/Packaging	<b>Other</b>				
			<input type="checkbox"/> Work Order Update	<input type="checkbox"/> Large Fab	<input type="checkbox"/> Composite	<input type="checkbox"/> Supplier					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <hr/> <hr/> <hr/>	
										<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
										<input type="checkbox"/> Other	

# Picklist Print

May-01-13 7:27:35 AM

Page 1

Work Order ID: 100894

Parent Item: D3209-041

Parent Item Name: Bracket Assembly

Start Date: 4/30/13

Required Date: 4/30/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP A04.06.09New issueKJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3209-3 Bushing		Manufactured	No			100	Each	17.0000	1	4		FF	13-05-15
--------------------	--	--------------	----	--	--	-----	------	---------	---	---	--	----	----------

Location	Loc Qty	Loc Code
----------	---------	----------

ST034	17	
-------	----	--

86696	17	
-------	----	--

Location	Loc Qty	Loc Code
----------	---------	----------

MAT003	34.9426859	
--------	------------	--

123649	0.2056859	
--------	-----------	--

124443	34.737	
--------	--------	--

M6061T6B1.500X01.250

6061-T6 Bar 1.50 x 1.25

Purchased

No

170 f 34.9427

0.175 0.736842

1.693

13-05-10

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS										
			Rework Scrap Use-as-is Work Order Update	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Skid-tube Machining Thermoforming Large Fab	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Crosstube Small Fab Finishing Composite	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Engineering Quality Other				
Part No. _____ NCR No. _____															
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <hr/> <hr/> <hr/>				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <hr/> <hr/> <hr/>	

DART AEROSPACE LTD	Work Order:	100894
Description: Bracket	Part Number:	D3209-1
Inspection Dwg: D3209	Rev: A	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

Measured by:	<u>JL</u>	Audited by:	<u>FSK</u>	Prototype Approval:	N/A
Date:	13-5-12	Date:	13/05/13	Date:	N/A

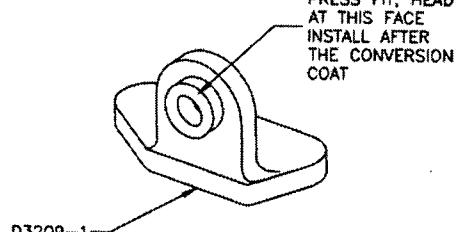
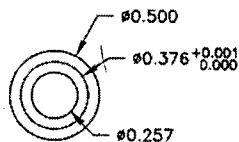
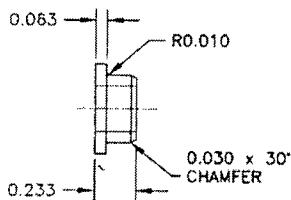
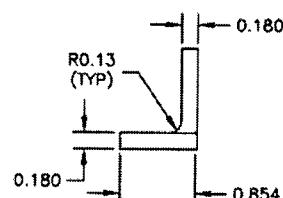
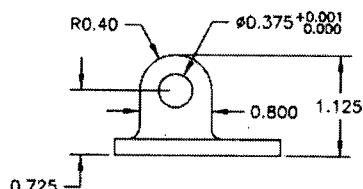
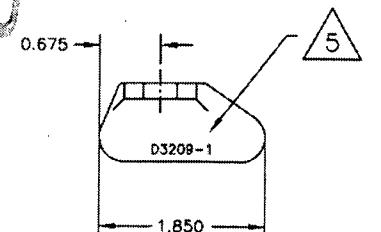
Rev	Date	Change	Revised by	Approved
A	05.02.17	New Issue (P/O D3209-041)	KJ/JLM	SJL



DESIGN <i>TT</i>	DRAWN BY <i>HF</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>CH</i>	APPROVED <i>CH</i>	DRAWING NO. D3209	REV. A	SHEET 1 OF 1
DATE 04.01.27		TITLE BRACKET	SCALE 1:2	
A	04.01.27	NEW ISSUE		

RELEASED  
APR 29 1978

Aug. 25, 1925



**D3209-3 BUSHING**

D3209-1 BRACKET; D3209-3 BUSHING

- 1) BREAK ALL SHARP EDGES 0.005 TO 0.015
  - 2) MATERIAL: 6061-T6 (QQ-A-200/8 OR QQ-A-250/11 OR QQ-A-225/8)  
ALUMINUM BAR (M6061T6B)
  - 3) MATERIAL: AISI 303 SS (M303R)
  - 4) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GREY SANTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
  - 5) ENGRAVE DART P/N AS SHOWN
  - 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 7) ALL DIMENSIONS ARE INCHES

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